



Ministry  
of  
Education

Ministry of  
Colleges and  
Universities

Hon. Bette Stephenson, M.D., Minister  
Harry K. Fisher, Deputy Minister

Government  
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# Skills

## Agreement under AOTA extended for five months

The federal and provincial governments have agreed to an extension of the agreement under the Adult Occupational Training Act to provide for institutional training.

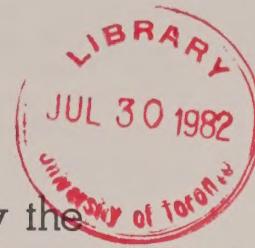
The agreement, signed by the Honourable Bette Stephenson, M.D., Minister of Colleges and Universities, and the Honourable Lloyd Axworthy, Minister of Employment and Immigration, extends provisions of the agreement under the Adult Occupational Training Act (AOTA) dealing with institutional training to August 1, 1982. The agreement was to have expired March 31, 1982.

Under the agreement, the Canada Employment and Immigration Commission will provide the province with \$58 278 000 during the April 1, 1982-August 31, 1982 period for "the purchase in the province of Ontario of institutional training, including apprentice training and for the payment of administrative expenses."

The \$58 278 000 equals five-twelfths of the total 1981-82 allocation, plus 12.5 per cent. This amount will cover such activities as the in-school portion of apprenticeship training, Canada Manpower Training Program (Basic Job Readiness Training, Basic Training for Skills Development, English As a Second Language, and skills training), as well as provincial facilities and administrative costs.

During the five-month extension, the federal and provincial governments will negotiate a new agreement meeting the anticipated provisions of the new National Training Act, which will replace the AOTA.

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Skills Development Division



Discussions began in Quebec City on September 14, 1981, when Mr. Axworthy told a meeting of Ministers with Manpower Responsibilities that the federal government would replace the AOTA with a new Act on March 31, 1982. An outline of the proposed new Act was received by the Ministry of Colleges and Universities on January 5, 1982. The outline was discussed by a meeting of Ministers with Manpower Responsibilities in Vancouver on January 11, 1982.

Key elements of the federal proposals include:

- a major focus on training in "national occupations" considered vital to the growth of the Canadian economy;
- improved systems and structures to determine manpower requirements; and
- federal investments to provide for capital and start-up costs of training.

For several years, the Ontario government has been taking steps to improve the quality of skills development programs in the province, by identifying key occupations facing shortages, by providing enhanced funding in advanced technology occupations under the Training in Business and Industry program (TIBI II), and by providing capital funds for advanced technology training facilities through the Ontario Board of Industrial Leadership and Development (BILD).

## Durham installs CAD/CAM

DURHAM--It is like a scene from Star Wars. The disc-shaped object spins silently on its axis as it moves away. Farther, farther, farther. Until it is nothing but a glowing dot. Then it is gone.

Not a space ship. An industrial part designed on a CAD/CAM (computer-aided design/computer-aided manufacturing) system at Durham College of Applied Arts and Technology. Durham's CAD/CAM system consists of a Computervision Designer V Interactive Graphics system, a computer numerically (CNC) controlled lathe, and a three-axis milling machine.

Funds for the Computervision system and the CNC lathe were provided by the Board of Industrial Leadership and Development (BILD), following a proposal presented by Durham College. The proposal was endorsed by the Durham Organization for Industrial Training (DO IT), one of the province's 63 Community Industrial Training Committees (CITCs).

CAD/CAM can make a contribution to the solution of Canada's productivity problem--enabling us to compete with the West German and Japanese economies. According to manufacturers, CAD/CAM has "more potential to increase productivity than any other development since electricity."

And it will certainly have a major effect on a number of industries, including:

### Electronics

- printed circuit board design
- schematic diagrams
- wiring diagrams
- integrated circuit design

### Industrial Engineering

- plant layout and design
- piping design

### Civil Engineering

- cartography and mapping

### Mechanical Engineering

- mechanic design
- numerically controlled manufacturing

CAD/CAM can increase productivity substantially, IF (and it's a big "if") it is used properly.

"CAD/CAM is a powerful tool, but it is only another tool," Gord McCrae of Durham College said in a Skills interview. "Its effectiveness depends on the people who use it."

Obviously, the operators of CAD/CAM equipment must be trained; however, users--engineers, managers and senior executives--must also be aware of the effect CAD/CAM will have on an operation. That's why the college is offering "users" seminars. One for engineers and managers was held on February 15 and 16; another seminar was held on April 8 and 9.

The college is also offering half-day and two-day introductory seminars for General Motors personnel. These seminars will teach participants how to restructure their workplaces in order to gain maximum advantage from CAD/CAM.

The college will also offer skills development programs for GM staff. A total of about 72 GM tool and die makers, tool and die designers, draftspersons, group leaders, and supervisors will participate in a 40-hour course--one day a week for five weeks.

These and other programs for community employers are being funded under the Training in Business and Industry II (TIBI II) program, administered by the Skills Development Division of the Ministry of Colleges and Universities.

CAD/CAM will also form a portion of two new three-year technologist programs at Durham--one in mechanical technology and one in electrical technology.

The CAD/CAM training facility looks more like an operating room than an industrial workplace. It is quiet, cool and white. Pens, drafting tables and T-squares are noticeable by their absence. Instead, there are four Computervision workstations.

Three-dimensional images appear on the workstation cathode ray tube at the touch of a keyboard. The images can be enlarged or reduced in size and manipulated on five axes--height, width, depth, pitch and yaw.

A project that might have taken weeks with the traditional method is completed in hours. The system will identify the centre of balance of the part, its mass properties (volume and weight), its moment of inertia, and its stress

points. Alternative designs can be explored quickly. Once the design is complete, the system will produce a paper tape to drive the milling machine or CNC lathe.

Here's an example of how CAD/CAM is used at McDonnell-Douglas, excerpted from the Fortune magazine of October 5, 1981:

"An airplane is a plumber's nightmare. A DC-10, for instance, has three miles of hydraulic tubing that twists, bends, and turns throughout the airframe in triply redundant systems. Fabricating all that tubing used to involve a great deal of slow and expensive handwork. To begin with, it was necessary to construct a mock-up of an airplane's tubing, with craftsmen bending and fitting by hand as they went along. The sections would then be taken out and stored on warehouse shelves to serve as templates for subsequent pieces of tubing, which were also bent by hand.

"Now master tubes are no longer stored on warehouse shelves. Instead, a designer routes replacement tubes from computer memory where the descriptions reside. At the press of a button, he retrieves the key structural elements from the memory and then designs the needed section of a tube on the terminal screen with a fibre-optics light pen. At the press of another button, the needed section of tubing emerges from a computer-controlled tube-bending machine nearby.

"The payoff from the new system has been remarkable. It's a lot more than just saving on warehouse space, although that in itself is substantial. The biggest benefit is that the tubes designed and fabricated under computer control fit into the airplane better, with fewer adjustments. When tubes were bent by hand for F-15 fighters at McDonnell-Douglas three years ago, as many as 100 tubes per aircraft didn't fit. Now, using computerized tube-bending for F-18 fighters, McDonnell finds that only four tubes per aircraft have to be readjusted. Most valuable of all is the saving in time. Typically, under the old system it took six weeks from release of engineering drawing to bent tube in hand. Elapsed time now: 18 minutes."

"The advantages mentioned in the Fortune article are valid," McCrae said, "but they don't happen overnight."

"Planning, restructuring, and training

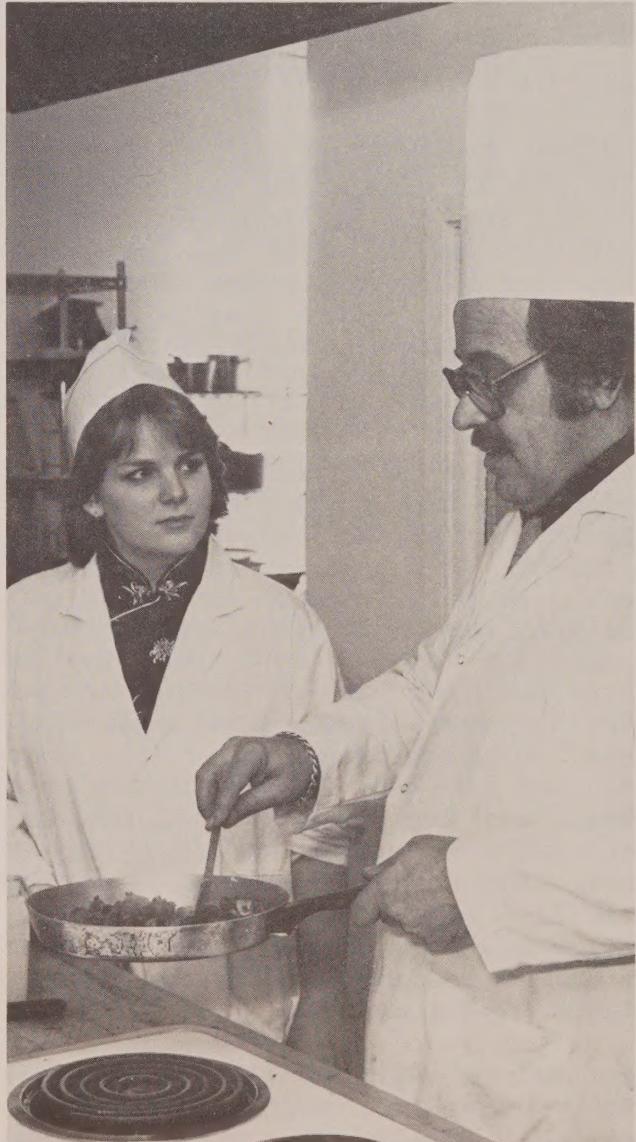
are essential first steps. At the college, we're attempting to provide the community with an opportunity to prepare for CAD/CAM with a world-class training facility."

## Apprentice scoops bronze

BARRIE--Laura Quirk, a 20-year-old apprentice in the advanced cook apprentice course at Georgian College, has won a bronze medal in the Commonwealth Culinary Competition held in London, England.

Laura's creation, "Yogurt Gateau", won her third place in the dessert category for juniors.

She completed the basic, in-school portion of her apprenticeship at Georgian College last year, studying under Chef Tibor Takacs. She is apprenticed to the La Lafayette restaurant in Barrie, working with Chef Michael Grant.



Laura Quirk watches as Chef Tibor Takacs prepares a haute cuisine dish.

## High Technology an "Economic Imperative": Hunter

Following are excerpts from a recent address by Kenneth E. Hunter, Assistant Deputy Minister, Skills Development Division.

"Imagine a computer that fills a room--the Univac I of 1940. If you told it where you were and where you wanted to go and told it about the winds, the temperature, fuel consumption, and a few other details, the Univac might be able to calculate the most efficient route to fly to Pasadena--if it strained. Now ... imagine a device that does the same thing, costs \$70, and slips into a pocket. It's a calculator driven by a micro-processor --a silicon chip.

"Imagine an airplane flying at 800 k.p.h. that is made of plastic-coated paper. It's Phenolic honeycomb, made from coated fibre. It's as flexible as paper. Yet, when it's sandwiched between graphite cloth, it's stronger than steel.

"Imagine that you are at home watching that airplane land at the very moment it touches down in California--thanks to satellites and to wires made of glass that conduct photons rather than electrons. Fibre optics they're called. And the picture you see is a three-dimensional one, projected into your room by holography.

"Imagine that your home is heated by natural gas that has been extracted from the Beaufort Sea and delivered to you as a liquid. It's a liquid because it has been made so cold that the atoms actually slowed down. It's called cryogenics.

"But it's not science fiction or fantasy. It's High Technology.

"For some, High Technology is a cause for profound concern--if not fear. These 20th Century Luddites recognize that High Tech is an agent for change and they fear that change. It will lead to massive unemployment and to a life of misery, they claim.

"For others, High Technology is electronic salvation. These Techno-apostles heave a collective sigh of relief with each technological discovery. They believe that chips will solve all our ec-

onomic, social, environmental, and energy problems and lead us to a life of luxurious leisure.

"Two extreme views. And both views are wrong. High Tech will mean neither Armageddon nor the New Jerusalem. Both views are based on ignorance of what High Tech is and is not. High Technology is not the chip, not the Phenolic honeycomb, not the cyrogenic processor. High Tech is simply the state of the technological art at any given point in history.

"The gunpowder revolution changed the nature of warfare. The steam revolution changed the nature of transportation. And what of our technological revolution? What will be the effect of our technological revolution on the economy, the society, the employment patterns?

"If you are looking to me for a definitive answer, you're barking up the wrong bio-mass. I don't know; no one knows.

"But we're not totally at sea. We know that High Technology will create new jobs in companies which devise, create, and manufacture high technology equipment.

"For instance, a recent survey by the Ottawa-Carleton Industrial Training Committee indicates that High Tech companies already face a serious shortage of skilled employees. The survey indicates that 45 companies, with a total work force of about 10 000, will have to hire about 3000 engineers, technologists, and technicians during the next three years.

"We also know that High Technology will lead to the creation of new industries and the demise of others. For instance, ... digital watches, powered by chips, have threatened--if not ruined--the Swiss analog watch industry. On the other hand, High Technology has created a huge (and still-growing) industry producing software that tells the computers what to do.

"We know High Tech will lead to some displacement in existing manufacturing and service industries--particularly in the clerical and assembly occupations. The introduction of chip-controlled industrial robots will eliminate many of the routine, de-humanizing and, often, physically hazardous factory jobs. (which might not be a bad idea, come to think of it). Heather Menzies, in her

book "Women and the Chip" (see Skills vol.2 No.2.), predicts that up to a million clerical workers--mostly women--will be unemployed UNLESS action is taken to assist them to respond to, prepare for, and adapt to the changes High Tech will cause.

"While Menzies' book may be a little overly pessimistic, she has identified the central challenge of High Technology: RESPOND. PREPARE. ADAPT. We must adapt the way we work, train, and think if we are to cope. If we are to maximize the benefits High Tech can bring and minimize the damage it could do.

"In short ... we must MANAGE High Tech we must create systems to manage High Tech that provide for thorough and thoughtful consideration, rational decision-making, and prompt implementation. And we must do it quickly.

"That management process must be based on information--good numbers. We must shorten the response time between event and decision, the same way High Tech has shortened the time between scientific discovery and commercial application. Here are some things which government can do.

"Government can monitor the emerging technologies to identify those which have a reasonable chance of going commercial. We can begin to predict the impact of those technologies on the workforce. We can determine the types of employees industry will require to utilize technological improvements. Government researchers can then compare those requirements against the skills taught in existing skills development programs. Then we can decide how to develop the necessary skills--either by modifying existing programs or developing new ones.

"We can help far-sighted companies to train their staff. The newest program--Training in Business and Industry II--is specifically designed to train in High Technology industries, to prepare people for the new era.

"Through a continuous process of monitoring, data collection, dissemination, and feedback, governments can keep a-breast of emerging technologies.

"Industry too must play a vital role in this process. Government can not do it

alone--nor should it. Here are some things industry can do. Obviously, employers and employees can articulate their immediate needs as the Ottawa-Carleton Industrial Training Committee did.

"However, industrial leaders can go beyond that--they can predict. They can operate their production planning and their skills development planning in tandem, so that they can develop a skilled work force BEFORE a new piece of equipment goes into production. They can invest in skills development, the same way they invest in research and development, materials, and capital equipment. They can hasten technological literacy by sharing information with employees, education, unions, and government.

"Once that predictive information is available, they can communicate with government and with the educational institutions they rely on to supply their skilled employees.

"Here are some things the schools can do. First, they can teach our young people mathematics, English or French and science programs that provide the basis for coping in a High Technology world. These generic skills are essential.

"However, there is a range of other skills students must acquire. Perhaps, the most essential is the ability to change. To paraphrase a statement in the Harvard Business Review by Edward Wrapp: the mark of a good High-Tech citizen is 'a high tolerance for ambiguity'.

"Students must learn that they may have to leave their home to train and work. They must understand that the traditional division between man's work and woman's will become blurred. First, because many of the new jobs will have no tradition. Second, because the female workforce will have to be tapped to provide an adequate number of workers.

"The decline in the population of young people because of the 'baby bust' is a well-known and inescapable fact. There are indications that there will not be a sufficient number of young men to supply the labour market needs in the traditional fashion. We will have to rely on young women to enter non-traditional occupations.

"Students must accept that jobs will emerge, mature, and disappear during their lifetime--time and time again. They must be able to cope with the challenge of changing careers three or four times. Therefore, students must have highly developed career management skills--the ability to make informed, rational, and independent decisions about themselves and their careers.

"But those decisions, too, must be based on reality--on facts. And the best way to find out what the High Tech world looks like is to see it first-hand. Industry and education must work together to expose our young people to the reality of the High Tech workplace--warts and all.

"In the early years--Grades 7 and 8, for instance--students must be introduced to technology and technological careers. In fact, the Ministry--in conjunction with industry--just completed an audio-visual presentation on this topic.

"As students mature, they can be exposed to the technological workplace, through plant tours, Work Experience and Co-operative Education. The only way students can truly understand the challenges and opportunities High Tech presents is to see technology at work first-hand. Industry and education must stop playing 'After you Alphonse' and start to bring the student and the workplace together. I suggest employers 'adopt' a school or a class and provide an on-going opportunity for students to get acquainted with business and industry.

"First-hand experience also makes the academic subjects relevant. In my experience at Conestoga College, the best motivator is reality. Nothing better motivates a student to learn electronic theory than seeing that theory in operation in the workplace. If schools are to prepare their students for life, they must prepare them for High Tech. It is and will be a High Tech world. We can not escape that fact.

"The management of High Tech must be a co-operative endeavour among government, education, and industry--both labour and management. In fact, it must be the responsibility of the society as a whole, for we will all be affected by the change High Tech will bring about.

"I recognize that I've set a massive task for government, for industry and,

for schools. But, despite the ambitiousness of the task, it must be done. "I mentioned earlier the impact of High Tech on specific segments of our labour force. But there is another effect on all of us--the economic impact.

"Canada must put its best against the best Japan, the United States and the European Economic Community can throw at us. If we are to compete and succeed, we must out-research them, out-train them, out-market them, and out-produce them. And we are not going to succeed in a High Technology world with a Low Technology economy.

"We can not afford to import technology. We can not afford the outflows of capital dollars. Nor can we afford to be vulnerable to the whims of other nations; we can not rely on other countries for strategic materials. Surely, the OPEC-induced energy crisis has proven that.

"We must develop a world-class High Technology industry of our own. Sure there are going to be risks. There will be failures but there will also be successes.

"We must take those risks. Despite it's popular image, Canada has a long tradition of risk-taking. The first transcontinental railroad was a risk. More recently, Canada risked and won on Telidon. Closer to home, Ontario risked more than money on the Urban Transport Development Corporation and won. Thanks to some far-sighted risk-takers, Ontario has achieved world-wide respect--in fact, dominance--in the people moving field.

"We must achieve the same degree of excellence in cryogenics, harsh-environment technology, bio-engineering, biomass conversion, and avionics and in technologies not yet imagined.

"Here in Canada we have one of the greatest treasure houses of natural resources in the world. We are blessed with energy resources; we have a vigorous, intelligent, and healthy population; we have a great educational system; we have capital; we do not lack a risk-taking spirit. We need only to mobilize our own resources and capabilities to achieve leadership in the technological age.

"High technology is not going away. It must be confronted, understood and man-

aged. It is not an arcane mystery. It is not an electronic panacea. It just is.

"If we are to continue to enjoy the standard of living we have come to expect, we must manage the changes which High Technology will bring. Not 'we can' or 'we should'. We must. High Technology is an Economic Imperative. We can not ignore it."

## COSTI bringing training to immigrant community

TORONTO--Ennio Rotolone, Domenico Circosta and Zafer Dinsel are all on their way to successful careers in the metalworking industry--thanks to the COSTI Industrial Training Project.

COSTI was established 20 years ago to help Italian immigrants integrate into Canadian life, although it now helps all immigrants. Its efforts in skills training, adult education, programs for injured workers, and social assistance have established it as a senior organization in the volunteer sector of Metropolitan Toronto.

Among the services COSTI offers are: free daily English classes, vocational guidance, and skill training. It also offers academic upgrading classes to Grade 10 and Grade 12.

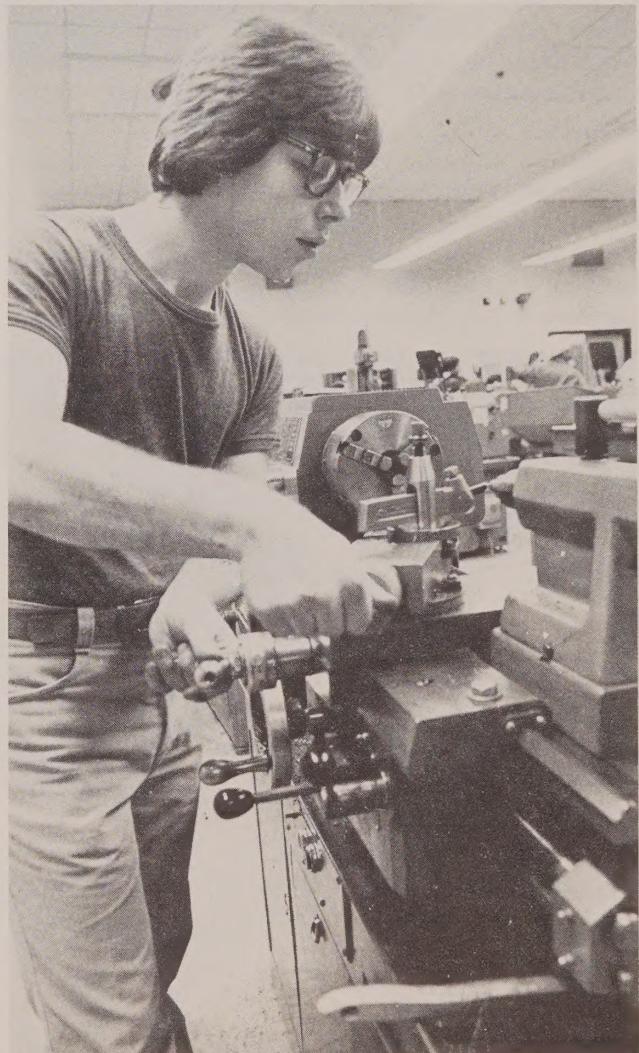
The Industrial Training Program is one of COSTI's more recent initiatives. Trainees come to COSTI from a variety of backgrounds. Ennio Rotolone had machining experience gained overseas, but was trapped in the drudgery of a dead-end, repetitious job with little opportunity for advancement. He came to COSTI for basic and advanced machine shop classes, where he refined his mechanical skills on various machines. He graduated from COSTI's evening Grade 10 upgrading class. COSTI proceeded to place Ennio as an apprentice general machinist at Breda Machinery, North York.

Domenico Circosta worked in a lumberyard. After hours, he attended COSTI's machine shop class, which he had read about in a local, ethnic newspaper. Domenico developed a particular interest in working on the boring mill. COSTI helped him obtain a job as a boring mill operator at New Era Tool and Die, North York.

Zafer Dinsel came to COSTI two years ago, when he was 19, with some machining experience gained in Turkey. He had little knowledge of English and few opportunities. He took English upgrading classes and three machine shop programs at COSTI before enrolling in a 40-week machine shop program at George Brown College. COSTI helped in finding a position as an apprentice tool and die maker with Turbo Tool, Mississauga.

Ennio, Domenico and Zafer are just three of the 124 persons COSTI has placed in employment, including 26 apprentices, through the Industrial Training Project.

The project began when employers, especially those in the immigrant community, began asking COSTI to help them in finding or developing people with a demonstrated mechanical inclination for such positions as general machinists, lathe operators, tool and die makers, welders, and fitter-welders.



Giuliano Favot, 19, works on one of the engine lathes located at George Harvey Secondary School, where COSTI conducts its evening machine shop class in conjunction with the York Borough board of education.

At the same time, many students in COSTI's upgrading program expressed a desire to begin apprenticeship in the metal machining occupations.

All of this information was taken into account when COSTI initiated the Industrial Training Project. A commitment was made to work with schools, community colleges, labour unions, industry, community resource organizations, and all levels of government to increase participation in skill training. For example, COSTI machine shop and blueprint programs are offered at George Harvey Secondary School, while the welding programs are offered at Centennial College.

An effort is being made to contact employers interested in training and re-training. First, the employer's needs are assessed during a visit to the plant; then, the industrial training co-ordinator aids the employer in obtaining any help needed in establishing a training program. The co-ordinator seeks to promote training programs by pointing out that they are invaluable investments in the future of the company.

COSTI is now accepting applications for entrance into skills training programs. The ability of the candidate is assessed during classroom observation or during hands-on job interviews conducted at the

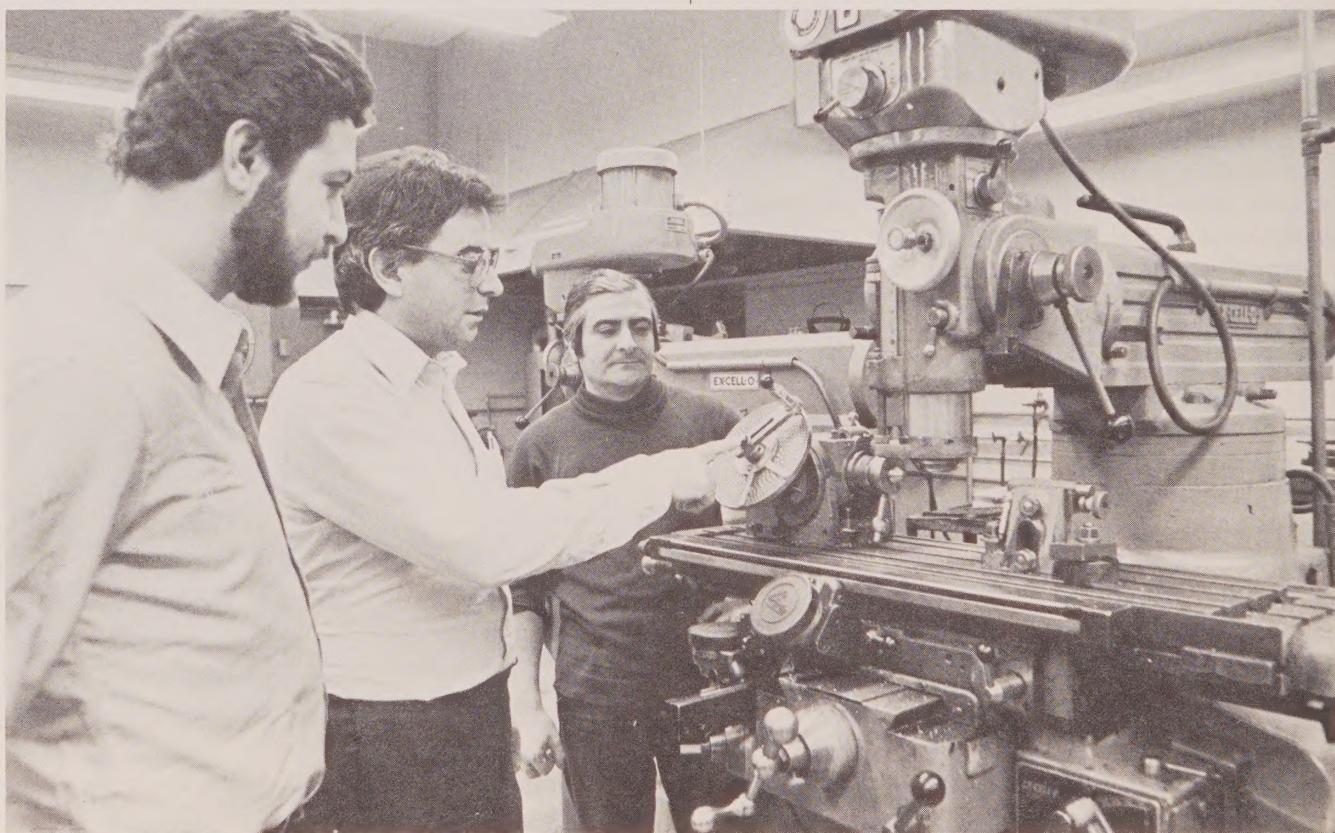
convenience of the candidate and the employer. If the candidate meets the needs of the employer, he/she will be hired.

The results of the project to date have been encouraging. A pool of potential employees, (compiled from students in related skill courses and individuals with necessary background), shows a total of 281 people in various stages of training in the metal machining industry. By contacting 119 employers, employment for 124 individuals has been found, including 26 apprentices.

This project is one way to mobilize the community interest in skill training and government's skill training initiatives. COSTI's key resource is its credibility in the ethnic community.

COSTI has the resources in many languages to increase community awareness of the opportunities for skilled workers. The work is only beginning. COSTI has taken the first step in educating the ethnic community, not only about the necessity of industrial training, but the tremendous opportunities offered by skill training programs.

For more information, contact:  
Nick Di Giovanni, COSTI  
70 D'Arcy Street, Toronto M5T 1K1  
(416) 977-7991



Ennio Ettore (middle), one of COSTI's machine shop instructors, demonstrates techniques used on the boring mill to Domenic Circosta, 27, (left) and Frank Petrone, 45, (right).

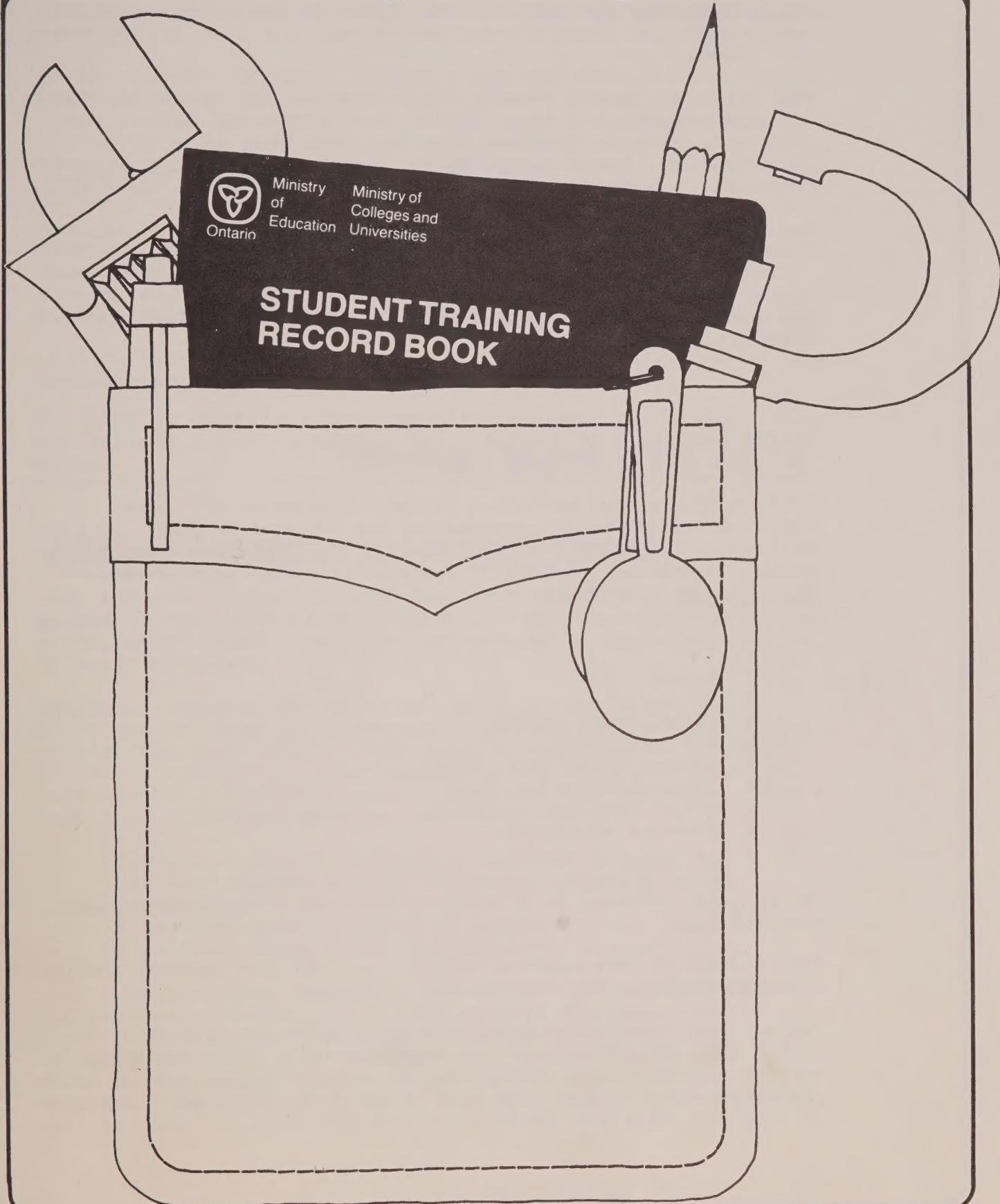
# *Linkage Grads:* **THEY CAN DO IT**



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**STUDENT TRAINING  
RECORD BOOK**



Pat, an employer, wants to hire two people to be trained as apprentices.

But not just anybody. Before he'll hire them, they have to meet his stringent standards. Once he's satisfied, he'll register them as apprentices.

Pat insists that the new trainees have some experience in the trade before he hires them; they can't be "green". He wants trainees who are serious about a career in a skilled occupation; he doesn't want people who are just trying out the trade.

The trainees should have a solid theoretical grounding in the occupation, but they should have practical skills too; they will have to produce from day one. They have to be well-trained; their training must be up to industry standards--his standards.

Well . . . There are hundreds of trainees ready for Pat. They're called Linkage graduates. They'll meet all Pat's "specs" and then some. Perhaps they'll fill your needs too.

You probably have some questions about Linkage graduates; here are some answers.

## "What are Linkage graduates?"

Linkage grads are secondary school graduates who have completed a training program in one of nine highly skilled occupations, as an integral part of their secondary school technical program. Linkage is offered in these apprenticed occupations:

- baker
- cook
- retail meat cutter
- hairstylist
- construction millwright
- industrial millwright
- motor vehicle mechanic
- general machinist

It is also offered in a modular program -- major appliance servicing.

Let's look at how Linkage works . . . in the general machinist occupation, for instance.

As you may know, the apprenticeship in general machinist lasts 6000 to 8000 hours or approximately three to four years. Apprentices usually spend about 90 per cent of their training time on the job; the balance is spent at a college of applied arts and technology (CAAT).

After apprentices have worked a year, they usually go to the CAAT for the **Basic** in-school term. BUT . . . Linkage students finish the **Basic** in-school term **before** leaving secondary school. So . . . when they apply for an apprenticeship with your company, they will have credit toward part of their training.

After another year, they complete the **Intermediate** in-school term at a CAAT. Finally, they attend college for the **Advanced** in-school term. Each in-school term lasts eight weeks.

In the modular program, students can complete five of the 17 modules.

## "How do I know they're serious?"

Most Linkage grads have spent a lot of time learning their skills. They probably chose to concentrate on a Linkage occupation early in secondary school. They probably took four secondary school credits in their chosen Linkage occupation. That's a lot of time and a pretty big commitment.

Linkage grads are persistent, motivated, and eager--just the kind of people you would probably like to hire.

So, they're certainly not just "trying out" the trade. They are serious about preparing for a career in a Linkage occupation.

## "How do I recognize a Linkage graduate?"

Most Linkage graduates have completed Grade 12. But you're probably less interested in what Linkage graduates **have** done in secondary school and more interested in what they can **do** in your workplace.

Linkage graduates can do a lot and they can prove it. Every one of them has a Student Training Record Book, often called "The Blue Book". The Student Training Record Book lists all the skills they learned while taking Linkage as part of their secondary school program. For instance, you'll know that a Linkage Machine Shop grad can . . .

Operate a manual horizontal surface grinder for the performance of the following grinding operations:

- machine surface grinding (surfaces and shapes)
- machine index grind (geometrical shapes)

. . . because the secondary school teacher has certified the student's competency in the Student Training Record Book. And before students get that endorsement, they have to **perform** that skill. Not just talk about the skill or write about the skill . . . **PERFORM** the skill. So, you'll know that the Linkage grads can **DO** something. Linkage grads will be able to produce.

## "What kind of training have they had?"

Linkage students have worked to the same training standards as registered apprentices. The training profile used for the Linkage component of the secondary school program is identical to the training profile developed by the Ministry of Colleges and Universities and followed by the CAATS when they train apprentices during the Basic in-school term. And that training profile was prepared with the assistance of industrial people--Journeymen and employers of Journeymen. You'll know that the Linkage grads have the skills you require because they have followed a training program people like you developed.

## "What's in it for me?"

More employers are making an investment in training. But they want to make sure they get the best possible trainees. Linkage grads are good trainees. Of course, Linkage graduates, like other trainees, are eligible to receive training assistance from government training programs.

Linkage grads are special. They're motivated; they're eager for work; and they're prepared.

So . . . if you're like Pat . . . if you're looking for bright young men and women for your workplace to help fill your skill needs, maybe you should consider hiring a Linkage graduate. You won't be sorry you did.

For further information on Linkage and Linkage Graduates, contact the technical director at the secondary school near you or your nearest field office of the Skills Development Division; these numbers will be in the blue pages of your telephone directory under "Colleges and Universities -- Ministry of/Apprenticeship. The Regional Director at your Regional Ministry of Education Office can also be of assistance. They're listed in your telephone book as well.

## Kitchener-Waterloo CITC conducts second survey

The Kitchener-Waterloo Community Industrial Training Committee (CITC) is conducting its second needs analysis survey --this time of the fitter-welder occupation.

Like most CITCs, the K-W committee initially examined manpower requirements in the metal working occupations. Now, it is broadening its area of interest to include the woodworking, plastics, and metal fabricating sectors. Of the three sectors, the need seemed greatest in the metal fabricating sector; therefore, the fitter-welder survey is being done first.

The committee is now about 18 months old. The first formal meeting was held on September 3, 1980 with Don W. Schott, Leigh Instruments, and Carl Hamel, Uniroyal Rubber machinery shops, as co-chairmen. Both co-chairmen have considerable expertise in industrial training, having been involved in the establishment and operation of a Local Advisory Committee for the metal machining trades in the mid 1960s. Others on the committee had participated in school board business and industrial liaison committees, Conestoga college program advisory committees, Chamber of Commerce education committees, and Labour Council Committees; but the September meeting, however, was the first time that any single organization in the community had brought together all interested parties with a mandate jointly issued by the federal and provincial governments to work co-operatively to facilitate industrial training.

The committee's first task was to conduct a needs analysis survey. Questionnaires were sent out to 200 industries in all major sectors; 109 were returned. The results indicated that over 70% of the net requirements were in the metal working sector. For that reason, the follow-up survey was conducted with 85 companies in that sector. Following the submission of a proposal, a Letter of Intent was signed on May 26, 1981. A total of 90 companies with 126 existing apprentices (machinists, tool and die makers, mould makers, industrial mechanics, fitter-welders) are included in committee activities. The projected number of additional apprentices during the next three years is 279.

## Sheridan trains for Telidon

OAKVILLE--Sheridan College has received a \$103 000 grant from the federal Telidon Industrial Investment Stimulation Program (IISP).

Sheridan will conduct four projects dealing with data entry, systems maintenance, retail applications, and industrial applications. The college will provide an additional \$103 000 to the project--matching the federal funding.

The Sheridan projects are four of 52 funded by the Department of Communications under IISP to encourage the manufacture and use of the Telidon videotex system, at a cost of \$9 500 000.

Algonquin and Loyalist Colleges also received funds under IISP; Skills will report on their projects in upcoming issues.

The Telidon system consists of three basic components:

- a central processing unit, which stores the information in the data base
- a Telidon user terminal (TUT), through which information is extracted and displayed on a television-type monitor
- a page creation terminal, through which new information can be entered into the data base.

The first of the four Sheridan projects will develop curriculum to train persons to create Telidon pages. The trainees will learn how to input text or graphic information into the Telidon data base. The page creation training will constitute about one-quarter of Sheridan's new one-year program in computer graphics. This program is designed for graduates of college technician/technologist programs in computer science or graphics or for persons with equivalent work experience.

The second project deals with the maintenance and repair of Telidon systems, particularly the page creation and user terminals, as well as the equipment which interfaces with the central processing unit. Training in Telidon maintenance will be incorporated into two existing Sheridan programs, the

electronic engineering technician (micro-computer servicing option) diploma program and the electronic technician (micro-computer servicing option) certificate program.

The third and fourth projects will examine possible applications of the Telidon system in the retail and industrial sectors.

Students from a number of college programs--including computer science, graphic arts and retail management--will conduct needs assessment surveys to identify possible uses for Telidon in retailing. The project will also examine how Telidon can provide community information.

The final project will identify how Telidon could be used in the industrial workplace. The college plans to develop training programs on how to use Telidon. It also plans to use Telidon as a training aid, perhaps in a course on CAD/CAM (computer-aided design/computer-aided manufacturing). It is expected that these training programs will be funded through Training in Business and Industry (TIBI) II, a provincial program administered by the Skills Development Division.

For further information on the Sheridan Telidon projects, contact:

Harve Honsberger, Trafalgar Road  
Oakville Campus, Sheridan College,  
Oakville L6H 2L1      845-9430

## Resources

### Ministry of Colleges and Universities

- Horizons

This 170-page publication describes all training programs available to young people after they leave secondary school. Included are sections on apprenticeship, colleges of applied arts and technology, and registered private vocational schools, as well as universities. The section on colleges incorporates information on diploma programs (technician and technologist) and certificate (short) programs.

- The Ontario Modular Training System

This pamphlet describes Ontario's Modular Training System, highlighting the programs offered in five areas--metal machining, stationary engineering, the

petro-chemical industry, major appliance servicing, and mining.

These publications are available from:  
Communications Services Branch  
Ministry of Colleges and Universities  
14th Floor, Mowat Block  
900 Bay Street, Toronto M7A 1KL

### Ontario Manpower Commission

- Labour Market Outlook for Ontario 1981-1986

This 142-page report predicts the province's supply of and demand for "white collar" and "blue collar" workers, using three scenarios--high-growth, medium-growth and low-growth. The report indicates, for instance, that:

- During the 1981-86 period, the combined supply of university and college graduates will fall short of the projected requirements by about 4500 per year, under the medium-growth scenario.
- Employment opportunities for college graduates appear to be promising. In fact, in some occupations, the college system will not be producing enough graduates.
- The analysis indicates the co-existence of shortages of post-secondary graduates in some fields and of surpluses in others.
- Present shortages in the highly skilled and medium-skilled blue-collar occupations are projected to continue in the future. The potential supply from the apprenticeship and modular training programs will provide roughly half of the manpower requirements for these occupations.

The report is available from:  
The Ontario Manpower Commission  
500 University Ave., 5th Floor  
Toronto M7A 1T7

## Métiers

MÉTIERS, la version en français du SKILLS, est disponible sur demande auprès de l'éditeur.

If you know of anyone who you feel would enjoy receiving SKILLS, please notify:

The Editor  
Room 1656, Mowat Block  
900 Bay Street,  
Toronto, Ontario M7A 1L2

**COMMUNITY INDUSTRIAL TRAINING COMMITTEES**

<u>Location</u>	<u>Committee or Association</u>	<u>Name &amp; Address of Chairman</u>	<u>Phone</u>
Bancroft	Bancroft & Area Industrial Training Committee	Mr. Jack Hattin, c/o Loyalist College, 8 Hastings St. N. Box 639, Bancroft, Ontario K0L 1C0	332-4356
Barrie	Barrie & District Community Industrial Training Committee	Mr. Bill Leslie (interim), c/o Georgian College, P.O. Box 2316, Orillia, Ontario, L3V 6S2	325-2705
Belleville (Quinte District)	Quinte Community Industrial Training Committee	Mr. Brian Riden, General Manager, Bata Engineering, Batawa, Ontario K0K 1E0	398-6106
Brampton/Miss. (Peel Region)	Peel Region Industrial Training Advisory Committee	Mr. Michael Redwood, c/o Cryovac Div. Grace & Co. (Canada) Ltd., 2365 Dixie Rd., Mississauga, Ont., L4Y 2A2	277-2751
Brantford (Brant County)	Brant Industrial Training Advisory Committee	Mr. Joe H. Hughes, Plant Supt., Steel Co. of Canada Limited, P.O. Box 220, 168 Colborne St. W., Brantford, Ontario N3T 5M8	753-2607
Brockville (Leeds & Grenville Counties)	Leeds & Grenville Industrial Training Advisory Committee	Mr. Gerry J. Perkins, Personnel Supervisor, Phillips Cables Ltd., Kingston Rd., Brockville, Ontario, K6V 5W4	345-5666
Cambridge	Community Industrial Training Committee	Mr. Graham C. Salt, Quality Assurance Manager, Canada Machinery Corp., Ltd., 1210 Balmoral Road, Cambridge, Ontario N1T 1A5	621-4020
Chatham (Kent County)	Kent Industrial Training Advisory Committee	Mr. K. Banting, Canadian Fram Limited, P.O. Box 2014, Chatham, Ontario N7M 5M7	352-6700
Cobourg/Port Hope (Northumberland County)	Northumberland Industrial Training Advisory Committee	Mr. Bernie Paziuk, Canadian General Electric, 755 Division St., North, Cobourg, Ontario K9A 3T1 and Mr. Ron Hillborn, General Foods, 520 William Street Cobourg, Ontario K9A 4L4	372-5411 372-2171
Collingwood	Collingwood & District Industrial Training Committee	Mr. Wm. D. Redick, P.O. Box 172 Cooperators Insurance, 7-3rd Street, Collingwood, Ontario L9Y 3Z4	445-0301
Cornwall (Stormont Glengarry Counties)	S.D. & G. Industrial Training Committee	Mr. Peter Johnson, c/o St. Lawrence College, Windmill Point Cornwall, Ontario, K6H 4Z1	933-6080

<u>Location</u>	<u>Committee or Association</u>	<u>Name &amp; Address of Chairman</u>	<u>Phone</u>
East Metro	East Metro Industrial Training Advisory Committee	Mr. Larry Figas, Personnel Manager, Pilkington Brothers Canada Ltd., Pilkington Glass Manufacturing Division, 350 Danforth Road, Scarborough, Ontario M1L 3X7	694-3401
Elliot Lake (East Algoma District)	East Algoma Community Industrial Training Council	Mr. William Kidd, Elliot Lake Centre, 6 Dunn Road, Elliot Lake, Ontario P5A 1H8	848-7284
Etobicoke & York	Industrial Training Advisory Committee for Etobicoke & York	Mr. John Charnock, President, Metier Ltd., 3621 Dundas St. W., Toronto, Ontario, M6S 2T2	762-3333
Goderich (Huron County)	Huron County Industrial Training Committee	Mr. Patrick Newington, Manufacturing Manager, Ex-cell-o Wildex, Canada, P.O. Box 910, 89 Don Street, Clinton, Ontario N0M 1L0	482-3461
Guelph	Guelph Community Industrial Training Committee	Mr. Jim Finamore, c/o Canadian General Electric, 201 Woodlawn Rd., West, Guelph, Ontario N1H 1B8	822-2120
Halton County	Halton Industrial Training (HIT)	Mr. Chuck A. Morris, Plant Mgr., Kaiser Refractories 636 Bronte Road, Oakville, Ontario L6J 5A8	827-4155
Haliburton	Haliburton County Industrial Training Committee	Mr. Kim Emmerson, Emerson Lumber Limited, Box 150, Maple Street, Haliburton, Ontario K0M 1S0	457-1550
Hamilton	Hamilton Industrial Training Advisory Committee (HITAC)	Mr. D.O. Braley, President, Orlick Industries Ltd., 35 Glen Rd., P.O. Box 5190, Hamilton, Ontario L8S 4L3	528-0171
Hearst	Hearst Industrial Training Advisory Committee	Mrs. Ginette Quirion, c/o Hearst Chamber of Commerce, Box 987, Hearst, Ontario P0L 1N0	362-4353
Kapuskasing	Kapuskasing & District Industrial Training Committee	Mr. Simon Filion, Controller, L.J. Fortin Construction Ltd., 8 Radisson Rd., Kapuskasing, Ontario P5N 3C3	335-8521
Kingston	Kingston & Area Community Industrial Training Committee	Mr. J. S. Campbell, President, Merand Ltd., 679 Justus Drive, Kingston, Ontario K7M 4H5	389-5511
Kirkland Lake	Kirkland Lake & District Industrial Training Advisory Committee	Mr. Jim Johnson (Training Co-ordinator, Adams Mines Limited), C/o Kirkland Lake & District Industrial Training Advisory Committee, P.O. Box 276, Kirkland Lake, Ontario P2N 3H7	567-3321

<u>Location</u>	<u>Committee or Association</u>	<u>Name &amp; Address of Chairman</u>	<u>Phone</u>
Kitchener-Waterloo	Kitchener-Waterloo & District Community Industrial Training Committee	Mr. Don Schott, Supervisor, Manufacturing Engineering, Leigh Instruments Ltd., 350 Weber Street North, Waterloo, Ont. N2J 4E3 884-4510 and Mr. Carl Hamel, Supervisor, Industrial Relations, Uniroyal Ltd., 149 Strange Street, Kitchener, Ontario N2G 4J4	744-7171
Lanark County	South Lanark Industrial Training Committee	Mr. David Bell, Stuart H. Bell & Sons Ltd., 46 Dufferin St. Perth, Ont. K7H 3A6	267-1965
Lindsay (Victoria County)	Victoria County Industrial Training Committee	Mr. Paul Tavazzi, Vice-President of Engineering, Trent Rubber Services (1978) Ltd., 100 Albert St. S. Lindsay, Ont. K9V 3H7	324-6891
London	London Industrial Training Advisory Board (LITAB)	Mr. Cal Balcom, Chairman, LITAB, c/o General Motors, Diesel Division, 2021 Oxford Street E., London, Ontario N6A 4N5	452-5520
Midland	Midland/Penetanguishene Industrial Training Committee	Mr. Michael R. Tidy, Personnel Manager, Decor Metal Products, 140 Bay Street, Midland, Ontario L4R 4L5	526-5451
Muskoka (Bracebridge/ Gravenhurst/ Huntsville)	Muskoka Training Advisory Committee	Mr. R.J.V. Curtis, Factory Manager, Uniroyal Ltd., P.O. Box 2230, Bracebridge, Ontario POB 1C0	645-4431
New Liskeard, Haileybury & Cobalt	Tri-Town Community Industrial Training Committee	Mr. R. Deakos, Technical Director, New Liskeard Secondary School, Niven Street, New Liskeard, Ontario POJ 1P0	647-7336
Niagara Peninsula	Niagara Industrial Training Advisory Committee (NITAC)	Mr. Michael Cheredar, Chairman, NITAC, P.O. Box 1401, St. Catharines, Ontario L2R 7S8	685-8411
North Bay (Nipissing District)	Nipissing District Industrial Training Advisory Committee	Mr. Donald M. Harris (acting) Vice President, Manufacturing, Rahn Metals & Plastics Ltd., 141 Regina St., P.O. Box 168, North Bay, Ontario, P1B 8H2	474-0410
North York & York Region	North York & York Region Community Industrial Training Committee	Mr. James Webb, Corporate Training Officer, Drummond McCall Incorporated, 1100 Caledonia Road, P.O. Box 177, Terminal A, Toronto, Ontario, M5W 1B4	781-1551
Orillia	Orillia & Area Industrial Training Committee	Mr. John J. Connor, Farnamet Limited, Wyandotte & Victoria Sts., Orillia, Ontario, L3N 6L6	325-2781

<u>Location</u>	<u>Committee or Association</u>	<u>Name &amp; Address of Chairman</u>	<u>Phone</u>
Oshawa (Durham County)	Durham Organization for Industrial Training (DO IT) P.O. Box 385, Oshawa, Ontario L1H 7L7	Mr. H. W. Tresise, Chairman, Durham Organization for Industrial Training (DO IT), c/o Durham College, Simcoe Street N., P.O. Box 576-0210	
Ottawa-Carleton	Ottawa-Carleton Industrial Training Council	Mr. Jack Fawcett, Computing Devices, P.O. Box 8508, Ottawa, Ontario, K1G 3M9	596-4827
Owen Sound (Grey and Bruce Counties)	Grey-Bruce Industrial Training Committee	Mr. Paul Stethem, Hobart Manufacturing Co., Ltd., 2875 East Bay Shore Rd. Owen Sound, Ont. N4K 5P5	376-8886
Parry Sound	Parry Sound & Area Skills Training Committee	Mr. Mel Fiddes, C.S.S. Operations Manager, CII Inc., Noble, Ontario, POG 1G0 and Mr. Roy E. Smith, 75 William Street, Parry Sound, Ontario P2A 1V3	342-5213
Peterborough	Peterborough Industrial Training Committee	Mr. Morley Bell, P.O. Box 1149 99 Strickland St. Lakefield, Ontario K0L 2H0 (Committee address: P.O. Box 1833, Peterborough, Ont. K9J 7X6)	748-7413
Prescott & Russell Counties	Prescott-Russell Industrial Training Committee	Mr. J. F. McAllister, c/o Montebello Metal Ltd., P.O. Box 399, Hawkesbury, Ontario K6A 2S3 and Mr. John A. Neysmith, Personnel Director, IVACO Rolling Mills, Box 322, L'Original, Ontario K0B 1K0	6322-7096 675-4671
Renfrew County	Renfrew County Industrial Training Committee	Mr. Joe Milloy, Westinghouse Cda. Ltd., P.O. Box 510, 30 Hamilton Ave., Hamilton, Ontario, L8N 3K2 (temporary address)	528-8811
Sarnia (Lambton County)	Lambton Industrial Training Committee	Mr. Stan A. Park, Mechanical Training Coordinator, Esso Chemical Canada, P.O. Box 3004, Sarnia, Ontario, N7T 7M5	339-2966
Sault Ste. Marie	Sault Industrial Training Council	Mr. Doug Hertz, Supv., Personnel Dev., Algoma Steel Corp., Queen Street W., Sault Ste. Marie, Ontario P6A 5P2	945-2248
Simcoe (Haldimand-Norfolk)	Haldimand-Norfolk Industrial Training Committee	Mr. Jim Coffer (Stelco - Nanticoke), c/o Fanshawe College of Applied Arts & Technology, P.O. Box 10, Ireland Rd., Simcoe, Ontario, N3Y 4K8	587-4541

<u>Location</u>	<u>Committee or Association</u>	<u>Name &amp; Address of Chairman</u>	<u>Phone</u>
Smiths Falls	Smiths Falls Industrial Training Committee	Mr. Lucien Lalonde (interim), Director of Economic Development, Corporation of Smiths Falls, P.O. Box 695, Smiths Falls, Ontario K7A 4T6	283-1238
Stratford	Stratford Industrial Training Advisory Council	Mr. Walter Bathe (interim), President, Hendrickson Mfg. (Canada) Limited, 532 Romeo Street, Stratford, Ontario N5A 6W4	271-4840
St. Thomas (Elgin County)	Elgin County Industrial Needs Council	Mr. Bill Horn, General Manager, Gorman-Rupp of Canada Ltd 70 Burwell St., St. Thomas, Ontario N5P 3R7	631-2870
Sudbury	Sudbury Industrial Training Advisory Committee	Mr. John Moland, Supv., Skills Training, Inco Metals Company, Training & Dev. Institute, 30 Cedar St., 8th Floor, Sudbury, Ontario, P3E 5R7	675-9597
South River (East Parry Sound)	East Parry Sound Industrial Training Committee	Mr. Gord Scarlett, Gord Scarlett Construction Limited, R.R. #1, South River, Ontario, P0A 1X0	386-2973
Timmins	Timmins Industrial Training Advisory Committee	Mr. James A. Page, Miller Paving Ltd., P.O. Box 886, Timmins, Ontario P4N 7G7	267-1107
Toronto Central	Toronto Advisory Committee on Employment Training (TACET)	Mr. C. C. (Bucky) Clare, President, Clare-Randall-Smith & Assoc. Ltd., 53 Lesmill Rd., Don Mills, Ontario M3B 2T8	445-8166
Wallaceburg	Wallaceburg & District Industrial Training Advisory Committee	Mr. James Burgess Sr., Waltec Industries Ltd., 1355 Wallace Street, Wallaceburg, Ontario N8A 1P5	627-3361
Wawa (North Algoma)	North Algoma Industrial Training Organization (NAITO)	Mr. Ed Nyman, Training Co-ordinator, The Algoma Steel Corporation, 856-2311 Limited, Ore Division, Macleod Mine, Wawa, Ontario, PO5 1K0	
Windsor	Windsor Chamber Task Force on Industrial Training	Mr. George H. Shaffer, President, Hartford Tooling Ltd., 1880 Assumption Street, Windsor, Ontario N8Y 1C4	252-3449
Woodstock (Oxford County)	Oxford Industrial Training Group	Mr. George Simmons, 643 Northdale Drive, Woodstock, Ontario N4S 5K8	539-9439

## ASSOCIATION-TYPE CITCs

<u>Location</u>	<u>Committee or Association</u>	<u>Name &amp; Address of Chairman</u>	<u>Phone</u>
Province-wide (Aerospace Industry)	Air Industries Assn. of Canada	Mr. Peter Broadhurst, Litton Systems, 25 City View Drive, Rexdale, Ontario, M9W 5A7	249-1231
Province-wide (A.P.M.A.C.)	The Automotive Parts Manufacturers' Assn. of Canada	Mr. Dennis DesRosiers, Director of Research, The Automotive Parts Manufacturers' Assn. of Canada, 55 York Street, Suite 402, Toronto, Ontario M5J 1R7	366-9673
Province-wide (C.M.B.A.)	Canadian Machine Builders' Association	Mr. H. B. Iron, Secretary-Treasurer, Canadian Machine Builders' Association, Box 3430, Cambridge (P), Ont. N3H 4S1	(Tor) 364-6208 (Cambr) 653-5774
Province-wide (C.T.M.A.)	Canadian Tooling Manufacturers' Association	Mr. Mike Solcz, Valiant Machine Inc., 7470 Tecumseh Road East, Windsor, Ontario N8T 1E9	944-3200
Thunder Bay Area	Grain Trade Industrial Training Committee	Mr. Ron E. Gorst, Saskatchewan Wheat Pool, 34 North Cumberland St., Thunder Bay, Ontario P7A 4L3	344-5701
Province-wide (M.E.M.A.C.)	Machinery & Equipment Manufacturers' Association of Canada	Mr. J. R. Romanow, President, MEMAC, 116 Albert Street Suite 701, Ottawa, Ontario K1P 5J3	232-7213
Northwestern Ontario	Northwestern Ontario Hospitality Industry Training Committee	Mr. Doug Cliff (interim), c/o Red Oak Inn, 555 West Arthur Street, Thunder Bay, Ontario P7E 5R5	577-8481
Northwestern Ontario	Northwestern Ontario Pulp & Paper Industrial Advisory Committee	Mr. Al G. Skinner, Abitibi Paper Co. Ltd., P.O. Box 2390, Thunder Bay, Ontario P7B 5E9	683-6211
Northern Ontario	Ontario Lumber Manufacturers' Association (OLMA)	Mr. Dan Ryan, Malette Lumber Inc., Box 1090, Timmins, Ontario P4N 7J6	267-1462
Province-wide (S.P.I.)	The Society of the Plastics Industry of Canada	Mr. Harry Blair, Business Development Manager, Shell Canada Ltd., 505 University Ave., Toronto, Ontario M5G 1X4	597-7111